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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shigeru Terashima

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CANON U.S.A. INC. INTELLECTUAL PROPERTY DEPARTMENT
15975 ALTON PARKWAY
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EXAMINER

RUTLEDGE, DELLA J

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 – 6, 8 – 14 and 16 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bannard (US Pub. No. 2006/0001322) in view of Nishino et al. (US Pat. No. 5,338,939).

Bannard has an exposure apparatus 10, shown in Fig. 1, which exposes a substrate 34 through a pattern of an original plate 32. The apparatus comprises a piping, see at least Fig. 3A, and a means of feeding into the piping liquid or gas having a predetermined temperature between 5° and 18° C; see paragraph 0083.

The reference does not disclose the composition of the piping, such as cooling pipe 62. The secondary reference, Nishino et al., exposes a substrate and teaches using a cooling pipe made of resin in col. 19, lines 37 – 39. One of ordinary skill in the art at the time the invention was made would be motivated to use a resin pipe because of the flexibility of the material enabling easy bending maneuvering of pipe when used on a movable component.

In regards to claims 2 -4, 8, either or both of the original or substrate stages 18, 20 may have the cooling system since both of the stages are susceptible to generating unwanted heat. The temperature of the coolant is lower than the temperature of the substrate.

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In regard to claims 5, 6, 19 and 19, the stage 18 of the original plate 32 and the stage 20 of the substrate 34 are in a vacuum chamber; see paragraphs 0037 – 0040.

In regards to claims 9 and 10, the first and second fluids have different temperatures, first fluid 356 and second fluid 358; see at least paragraphs 0008, 0083.

In regards to claim 11, one conduit or pipe encircles the other, see at least the pipes leading to or from first and second fluid means 356, 358 in Fig. 3A and paragraphs 0011, 0089.

In regard to claims 12 – 14, the temperature of one fluid is lower than the other; the temperature of the second fluid is lower than the temperature of the first fluid; see paragraph 0008.

In regard to claims 16, 17 and 22, the stages may be heated using a heat exchanger; see paragraph 0079. A Peltier device is not specifically disclosed, but a Peltier device is a commonly used type of heat exchanger and one of ordinary skill in the art would be motivated to such a device as the heat exchanger.

In regard to claim 20, the reference teaches the method of producing a device as claimed, see Fig. 7B and paragraph 0112.

In regard to claim 21, the reference does not disclose a temperature of the optical system, however, since the exposure operation is adversely affected by the temperature changes in the optical system, one of ordinary skill in the art would be motivated to use a cooling system to regulate the temperature of the optical system.

Response Data

Art Unit: 2851

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Rutledge whose telephone number is (571) 272-2127. The examiner can normally be reached on Mon - Thurs, 6:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


D. Rutledge
Primary Examiner
Art Unit 2851

dr
3/13/06